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Perman & Green, LLP 99 Hawley Lane Stratford, CT 06614			LOWE, MICHAEL S	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAKOB BLATTNER, RUDY FEDERICI, WILLIAM FOSNIGHT,
and CLINT HARIS

Appeal 2008-004648
Application 10/628,980
Technology Center 3600

Decided: August 28, 2009

Before: JENNIFER D. BAHR, LINDA E. HORNER, and KEN B.
BARRETT, *Administrative Patent Judges.*

BAHR, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Jakob Blattner, et al (Appellants) appeal under 35 U.S.C. § 134 (2002) from the Examiner's decision rejecting claims 1, 3-7, 9, 13-17, and 21-28¹. Claim 2 has been canceled. Claims 8, 10-12, 19, and 20 have been withdrawn. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

The Invention

Appellants' claimed invention is directed to a reticle manipulating device. The device 1 has a housing 2 for maintaining clean-room conditions for the reticles. Spec. 8:8-10, fig. 1. The device 1 contains several functional units, including an input/output station 7 having openings 9 to add or remove reticles from the housing 2. Spec. 9:24-33, figs. 1, 5. Manipulating device 18 is a bent-arm robot inside housing 2 that can transfer reticles to different functional units. Spec. 10:19-29. Furthermore, an interface of the input/output station 7 provides a detachable mounting and electrical connection to the housing 2. Spec. 4:3-21.

¹ Claim 18 is subject to final rejection, but is not involved in this appeal, as indicated on page 2 of the Appeal Brief. The Examiner acknowledges that claim 18 is not involved in this appeal (Ans. 2), and treats Appellants' inclusion of claim 18 in the first ground of rejection to be reviewed on appeal (App. Br. 4) as an inadvertent typographical error (Ans. 3). Appellants do not contest the Examiner's correction (deletion of claim 18) of the first ground of rejection to be reviewed on appeal (Ans. 3). Upon return of jurisdiction of this application to the Technology Center, the Examiner may take the appropriate action with respect to the disposition of claim 18. *See Ex parte Ghuman*, 88 USPQ2d 1478, 1480 (BPAI 2008) (precedential), available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/rm081175.pdf> (rejected claims not pursued in an appeal brief should be cancelled).

Claims 1 and 9, reproduced below, are illustrative of the claimed invention.

1. A reticle manipulating device with an at least substantially closed housing for maintaining clean-room conditions inside the housing, which has several functional units, each of which conducts at least one function for the reticle inside the housing, wherein a first functional unit is designed as an input/output station with an opening through which reticles are introduced and discharged in and out of the housing, a manipulating device also arranged inside the housing for transferring the reticles from the input/output station to at least one other functional unit and vice versa, is hereby characterized by an interface of the first functional unit, by means of which the first functional unit can be connected to the reticle manipulating device, the interface having a mechanical and an electrical part forming a detachable mounting and electrical connection of the first functional unit with the housing of the reticle manipulating device.

9. A reticle manipulating device comprising:
a housing capable of having a controlled environment therein;
at least one processing module connected to the housing and capable of processing a reticle; and
a transport apparatus connected to the housing for transporting the reticle between the at least one module to another portion of the housing;
wherein the at least one module is removably connectable to the housing, the at least one module having an interface adapted for removably coupling the module to the housing, and characterized in that the at least one module is selectable for connection to the housing from a

number of different interchangeable modules each having a different predetermined characteristic and being capable of connection to the housing.

The Rejections

Appellants seek review of the Examiner's rejections under 35 U.S.C. § 112, second paragraph, of claims 1, 3-7, 9, 13-17, and 21-28 as indefinite; under 35 U.S.C. § 102(e) of claims 1, 3-7, 9, 13-17, 24-26, and 28 as anticipated by US 6,690,993 to Foulke (Feb. 10, 2004); and under 35 U.S.C. § 103(a) of claims 21-25, 27, and 28 as unpatentable over Foulke.

SUMMARY OF DECISION

We AFFIRM-IN-PART and enter a NEW GROUND of REJECTION.

ISSUES

The dispositive issues presented in this appeal are as follows:

- (1) Have Appellants demonstrated that the Examiner erred in concluding that claim 1 is indefinite? In particular, are the phrases identified by the Examiner on page 4 of the Answer ambiguous because they cannot be mapped to a particular limitation?
- (2) Have Appellants demonstrated that the Examiner erred in concluding that claim 9 is indefinite? In particular, is the limitation in claim 9 requiring that the module is "selectable" definite?
- (3) Have Appellants demonstrated that the Examiner erred in finding that Foulke inherently describes the detachable mounting/removable coupling feature of claims 1, 3-7, 9, 13-17, and 21-28? In particular,

would the capability of pod openers to be cut from a housing by a hacksaw constitute a "detachable mounting/removable coupling"?

(4) Is the full scope of claim 9 enabled? In particular, does the Appellants' Specification provide an enabling disclosure for the full scope of the "processing module" limitation?

FACTS PERTINENT TO THE ISSUES

(FINDINGS-OF-FACT (FF))

FF1 Appellants' Specification describes that the device 1 has a housing 2. Spec. 8:8-10, fig. 1. Input/output [functional] units 8 of an input/output station 7 are integrated into the front of the housing 2. Spec. 9:24-27.

FF2 Foulke describes the pod openers 32a-d as objects that open pods 31 at a pod station 32, where the robot 18 loads and unloads reticles 38 into and out of the pods 31. Col. 3, ll. 14-24.

FF3 Foulke does not specifically describe any particular form of mounting or attachment between the pod openers 32a-d and the housing of Foulke's system.

PRINCIPLES OF LAW

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986) (citations omitted).

The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, *e.g.*, competitors of the patent owner, can determine whether or not they infringe.

All Dental Prodx, LLC v. Advantage Dental Products, Inc., 309 F.3d 774, 779-80 (Fed. Cir. 2002).

If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is “inherent” in its disclosure. To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 . . . (Fed.Cir.1991). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.* at 1269, 948 F.2d 1264 . . . (quoting *In re Oelrich*, 666 F.2d 578, 581 . . . (C.C.P.A.1981)).

In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999). When relying on the theory of inherency, the examiner has the initial burden of providing a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic reasonably flows from the teachings of the applied prior art. *See In re King*, 801 F.2d 1324, 1327 (Fed. Cir. 1986).

“[C]laims are interpreted with an eye toward giving effect to all terms in the claim.” *Bicon Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir.

2006). *See also Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1362 (Fed. Cir. 2007) (denouncing claim constructions that render phrases in claims superfluous).

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). However, the fact that a claim is broad does not mean that it is indefinite, that is, undue breadth is not indefiniteness. *In re Johnson*, 558 F.2d 1008, 1016 n.17 (CCPA 1977); *In re Miller*, 441 F.2d 689, 693 (CCPA 1971); and *In re Gardner*, 427 F.2d 786, 788 (CCPA 1970).

When a claim limitation does not include the word “means,” it is presumed that Appellants did not intend to invoke § 112, sixth paragraph. *See Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004). In a post-issuance claim construction, this presumption “can be overcome if it is demonstrated that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* (citations and internal quotes omitted). During prosecution, however, Appellants have the opportunity to amend the claims to clearly indicate Appellants’ intent to invoke 35 U.S.C. § 112, sixth paragraph, by inserting “means” language into the claims. *Ex parte Miyazaki*, 89 USPQ2d 1207, 1215-16 (BPAI 2008). Therefore, the presumption is not necessarily overcome where the pending claim lacks sufficient structure. *Id.*

“[W]hen [a claim] limitation encompasses any and all structures or acts for performing a recited function, including those which were not what

the applicant[s] had invented, the disclosure fails to provide a scope of enablement commensurate with the scope of the claim[.]” *Miyazaki*, 89 USPQ2d at 1217 (citing *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 12 (1946)).

ANALYSIS

Issue (1) - Is claim 1 definite?

The Examiner rejected claim 1 as indefinite because it is not clear which object several clauses are modifying, in particular: the "which" clauses in lines 3 and 4; the "is hereby" clause in line 10; the "by means of which" clause in line 11; and the "can be connected" clause of line 12. Ans. 4. Appellants argue that the "which" clause in line 3 and the "is hereby" clause modify the subject of the sentence (reticle manipulating device), and that the "which" clause in line 4 modifies the functional units. Appeal Br. 5. Appellants allege that the other clauses are clear, but do not provide a reason why, nor suggest what the clauses modify. *Id.*

The "which" clause in line 3 could modify either the housing 2 or the reticle manipulating device 1. That is, the claim leaves it open as to whether the reticle manipulating device, or the housing of the reticle manipulating device "has" the functional units. However, the housing 2 houses, or "has," everything inside of the device 1. Thus, whether the "which has several functional units" modifies the housing 2 or the device 1 is immaterial to the scope of the claim. *See FF1*, noting the functional units are described in the Specification as inside the housing.

The "which" clause in line 4 modifies the functional units because the claim recites several functional units, and this clause begins "each of

which..." denoting that the clause intends to modify a plural limitation, the functional units being the only plural limitation so far into the claim. Moreover, the modifier of conducting at least one function is logically associated with the functional units. Therefore, this clause is clear.

The "is hereby" clause in line 10 states that the object that it modifies is "characterized by an interface of the first functional unit." This clause is not modifying the first functional unit because the "is hereby" clause discusses the modified object's relationship with the first functional unit. Therefore, this clause could modify either the reticle manipulating device or the manipulating device (or the housing, but see our discussion of the line 3 "which" clause, *supra*, rendering the distinction irrelevant).

The Examiner interprets this clause to refer to the "reticle handling device," which is taken to mean the "manipulating device" (i.e., robot arm 18) of claim 1. However, this interpretation is strained. The drawings depict the first functional unit as attached to the device/housing and separate from the manipulating device. *See, e.g.*, fig. 1 (noting I/O functional unit 8 attached to housing 2 at I/O station 7), fig. 6 (noting the handling/manipulating device [robot arm] 18 is separate from the I/O units mounted at I/O station 7). Further, the remainder of the claim further describes the "interface" introduced in this clause, stating that the interface "form[s] a detachable mounting ... with the housing" further bolstering the interpretation that this clause, with its interface, modifies the reticle manipulating device. Therefore, the "is hereby" clause, while awkward, modifies the reticle manipulating device, using the claim's grammatical structure and the Specification's drawings as a guide.

The "by means of which" clause of line 11 refers back to the interface of the previous clause, following the general rule that a modifier modifies that which is closest to it. The "by means of which" clause clearly does not modify the "first functional unit," because the object modified connects the first functional unit to the reticle manipulating device. Any notion of reading this clause as modifying the manipulating device (e.g., the robot arm) would be inconsistent with the underlying disclosure in the Specification. It is clear from the Specification that the functional units are connected via the "interface" on the housing, not a robot arm. *See FF1; see also fig. 1* (noting I/O functional unit 8 attached to housing 2 at I/O station 7), *fig. 6* (noting the handling/manipulating device [robot arm] 18 is separate from the I/O units mounted at I/O station 7). Therefore, reading the claim as a whole, in light of the Specification, it is clear that the "means [by] which" the first functional unit is connected to the reticle manipulating device is the "interface."

The "can be connected" clause of line 12 states that the first functional unit "can be connected to" the reticle manipulating device. There is no ambiguity as to what the phrase is modifying. While "can be connected" is a broad limitation, as the Examiner pointed out, because it could refer to any of a broad range of connections, breadth does not equate to indefiniteness. *See, e.g., In re Johnson, 558 F.2d at 1016 n.17.*

Issue (2) - Is claim 9 indefinite?

The Examiner found that claim 9 is indefinite because "selectable" is "unclear since it is not defined how and in what fashion the modules are 'selectable.'" Ans. 4. Appellants argue that the Examiner has merely shown

that the term is broad, but not indefinite. Reply Br. 3-4. Indeed, breadth does not equate to indefiniteness. *In re Johnson*, 558 F.2d at 1016 n.17.

Section 112, second paragraph, requires an Applicant to specify *what* their invention is. 35 U.S.C. § 112, second paragraph (requiring Applicant to "distinctly claim[] the subject matter which [he] regards as his invention"). In this case, the Examiner's questions of "how" or "in what fashion" something is "selectable" do not raise concern as to *what* Appellants are trying to claim, but instead are directed to *how* one of ordinary skill would perform a "selection." However, a question regarding *how* to perform a "selection" is not a question of indefiniteness, but of enablement. The Examiner has not made any indication that one of ordinary skill would not know *how* to perform any of the myriad tasks that could fall under the scope of "selectable." Instead, the Examiner has attempted to indicate that one of ordinary skill could perform many tasks that would constitute "selecting" a module. Therefore, the Examiner has merely shown that the claimed "selection" is extremely broad, but not indefinite.

The Examiner further found that claim 9 was indefinite because it was unclear if the "different interchangeable modules" were being positively recited. Ans. 4. The phrase "characterized in that the at least one module is selectable . . . from a number of different interchangeable modules" further limits the "at least one processing module." Thus, the claim is not positively reciting these additional modules, but, rather, is just further limiting the existing module by requiring it to be interchangeable.

Issue (3) - Has the Examiner shown that Foulke describes a detachable mounting or a removable coupling?

Claim 1 requires an interface with a "detachable mounting," while claim 9 requires an interface for "removably coupling." Because the Examiner's articulation of the rejection is the same for claim 9 as for claim 1 (notwithstanding the different claim language), we focus on the Examiner's rejection of claim 1.

The Examiner found that Foulke describes a "detachable interface with mechanical and electrical parts" inherently at figs. 1, 6, 7, 15, and 16. Ans. 5. The Examiner provides as an example pod opener interface 32a-d, which "is mechanical and has to have an electrical control element." Ans. 9 (citing Foulke, figs. 7-13). Further, the Examiner notes that everything is detachable, "even [by] a hacksaw." Ans. 9. Appellants argue that Foulke does not show pod openers 32a-b having the claimed interface with a detachable mounting, and that the removal by hacksaw is not an example of something that is "detachable." Reply Br. 3.

Foulke describes the pod openers 32a-d as objects that open pods 31 at a pod station 32, where the robot 18 loads and unloads reticles 38 into and out of the pods 31. FF2. Foulke does not describe the relationship of these pod openers 32a-d with the housing of system 10, such that it is not clear what kind of connection, if any, is formed between the openers 32a-d and the housing of system 10, or if that connection is detachable. FF3. The Examiner attempts to fill in the gap left by Foulke with the statement that every connection between two things is "detachable," such as by the destructive use of a hacksaw (Ans. 9). However, to state that every connection is detachable, even by destructive means, would fail to give

meaning to the limitation, thus improperly rendering the limitation superfluous. *See Stumbo*, 508 F.3d at 1362. While "detachable" may be construed broadly, it must be construed in a way that gives the term effect. A forceful, destructive "removal," such as by a hacksaw, fails to give the term any effect, since everything can be forcefully removed in some way. Thus, the Examiner's finding that the pod openers 32a-d could be removed by a hacksaw is not a sufficient basis in fact and/or technical reasoning to support a finding that the pod openers 32a-d inherently have a detachable mounting. *See King*, 801 F.2d at 1327.

Claim 9 requires an interface not with a "detachable mounting," but a "removabl[e] coupling." The Examiner uses the same articulation for both claim 1 and claim 9. *See Ans. 4-5*. The Examiner's finding that the pod openers 32a-d could be removed by a hacksaw is not a sufficient basis in fact and/or technical reasoning to support a finding that the pod openers 32a-d inherently have a removable coupling.

For the above reasons, we do not sustain the rejection of claims 1 and 9, or claims 3-7, 13-17, 24-26, and 28, each of which depends from claim 1 or claim 9, as being anticipated by Foulke.

The Examiner's rejection of claims 21-25, 27, and 28, which depend from claim 9, as being unpatentable over Foulke, is grounded on the Examiner's unsupported finding that Foulke describes a "detachable interface with mechanical and electrical parts" inherently at figs. 1, 6, 7, 15, and 16. Therefore, we also do not sustain this rejection.

Issue (4) - Scope of Enablement of claim 9

Claim 9 requires a reticle manipulating device with "at least one processing module ... capable of processing a reticle." Claim 9 does not recite the specific structure of the module, but defines it solely in terms of its function (anything capable of processing a reticle). While "there is no statutory ban on the use of [such] 'functional' language ...," Appellant's Specification must "support in nonfunctional terms the functional statements made in the claims." *In re Fuetterer*, 319 F.2d 259, 265 (CCPA 1963). Claim 9 does not include the word "means," and thus does not invoke the safe harbor of 35 U.S.C. § 112, sixth paragraph, which would limit the limitation to those examples specifically enumerated in the Specification. See *In re Donaldson Co.*, 16 F.3d 1189, 1193-94 (Fed. Cir. 1994) (the PTO may not disregard the structure disclosed in the specification corresponding to [means-plus-function] language when rendering a patentability determination); *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.* 520 U.S. 17, 27-28 (1997) ("an applicant can describe an element of his invention by the result accomplished or the function served Section 112, ¶ 6, now expressly allows [these] so-called 'means' claims"). Finally, nothing in the record indicates that one of ordinary skill in the art would construe a "module" to refer to any particular structure. Therefore, given the broadest reasonable interpretation, the scope of the "module" limitation encompasses any and all structures capable of processing a reticle.

When a limitation "encompasses any and all structures or acts for performing a recited function, including those which were not what the applicant[s] had invented, the disclosure fails to provide a scope of enablement commensurate with the scope of the claim[.]" *Miyazaki*, 89

USPQ2d at 1217 (citing *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 12 (1946)). According to the Specification, the "module" limitation encompasses things that are capable of processing a reticle that were "unforeseen" by Appellants at the time of invention. *See* Spec. 34:18-21 ("[m]any other unforeseen examples of modules ... may exist and are covered by the scope of the embodiments described herein."). Therefore, the scope of "module" as defined in the Specification includes structures that Appellants have not invented. As such, we enter a new ground of rejection for claim 9, pursuant to our authority under 37 C.F.R. § 41.50(b), as unpatentable for lack of an enabling disclosure under 35 U.S.C. § 112, first paragraph.²

CONCLUSIONS

- (1) Appellants have shown that the Examiner erred in determining that claim 1 is indefinite. The phrases, while not a model of clarity, do not give rise to indefiniteness; each phrase can be mapped to the element that it modifies.
- (2) Appellants have shown that the Examiner erred in determining that claim 9 is indefinite. The term "selectable" is broad, but not ambiguous. Further, the "different interchangeable modules" are not positively recited, but are further limiting to the claimed module.
- (3) Appellants have shown that the Examiner erred in determining that Foulke's pod openers 32a-d inherently describe a "detachable

² We leave to the Examiner the task of determining whether the scopes of the "modules" recited in the claims depending from claim 9 encompass structures not enabled by Appellants' disclosure.

mounting" or "removable coupling." The Examiner's finding that the pod openers 32a-d are removable by a hacksaw fails to give meaning to the claimed limitation, and to provide sufficient basis in fact and/or technical reasoning to support a finding of inherency.

(4) The "module" limitation of claim 9 encompasses any and all things that are capable of processing a reticle, including things that were admittedly unforeseen by Appellants at the time of invention, such that claim 9 is unpatentable for lack of an enabling disclosure.

DECISION

The Examiner's decision is reversed as to claims 1, 3-7, 9, 13-17, and 21-28. Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection of claim 9 as unpatentable for lack of an enabling disclosure under 35 U.S.C. § 112, first paragraph.

FINALITY OF DECISION

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the

examiner, in which event the proceeding will be remanded to the examiner....

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record....

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

REVERSED; 37 C.F.R. § 41.50(b)

hh

Perman & Green, LLP
99 Hawley Lane
Stratford, CT 06614